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EXTRAORDINARY

PART II—Section 3

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MINISTRY OF FINANCE (REVENUE DIVISION)

NOTIFICATIONS

CUSTOMS

New Delhi, the 1st March, 1956.

S.R.O. 493.—In exercise of the powers conferred by section 23 of the Sea Customs Act, 1878 (VIII of 1878), as in force in India and as applied to the State of Pondicherry, the Central Government hereby exempts each of the articles specified in column 3 of the Schedule hereto annexed when imported into India or the State of Pondicherry for use as manure from the whole of the duty of Customs leviable thereon under the Indian Tariff Act, 1934 (XXXII of 1934) and also from the whole of the additional duty of Customs leviable thereon under any law for the time being in force.

SCHEDULE

Serial No.	Relative Item No. in the First Schedule to the Indian Tariff Act, 1934.	Name of article
1	2	3
1	28	Urea
2	28	Ammonium phosphates
3	28(8)	Muriate of potash

S.R.O. 494.—In exercise of the powers conferred by section 23 of the Sea Customs Act, 1878 (VIII of 1878), as in force in India and as applied to the State of Pondicherry, the Central Government hereby exempts tea when liable to duty under sub-item (iii) of Item No. 5 of the Second Schedule to the Indian Tariff Act, 1934 (XXXII of 1934) from so much of the duty of Customs leviable thereon under the last mentioned Act as is in excess of six annas per lb. when such tea is exported from India or the State of Pondicherry.

[No. 10]

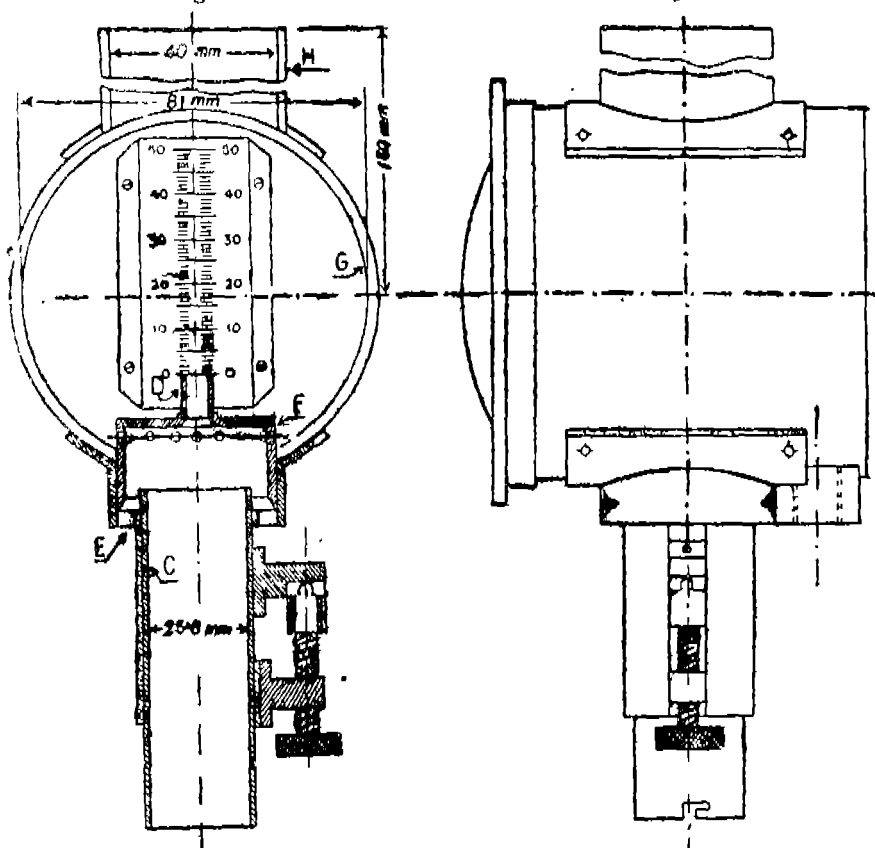
S.R.O. 495.—In exercise of the powers conferred by Explanation II to Item No. 27(4) of the First Schedule to the Indian Tariff Act, 1934 (XXXII of 1934), as in force in India and as applied to the State of Pondicherry, the Central Government hereby directs that the manner in which flame height shall be determined in the apparatus known as the Smoke Point Lamp shall be as prescribed below:—

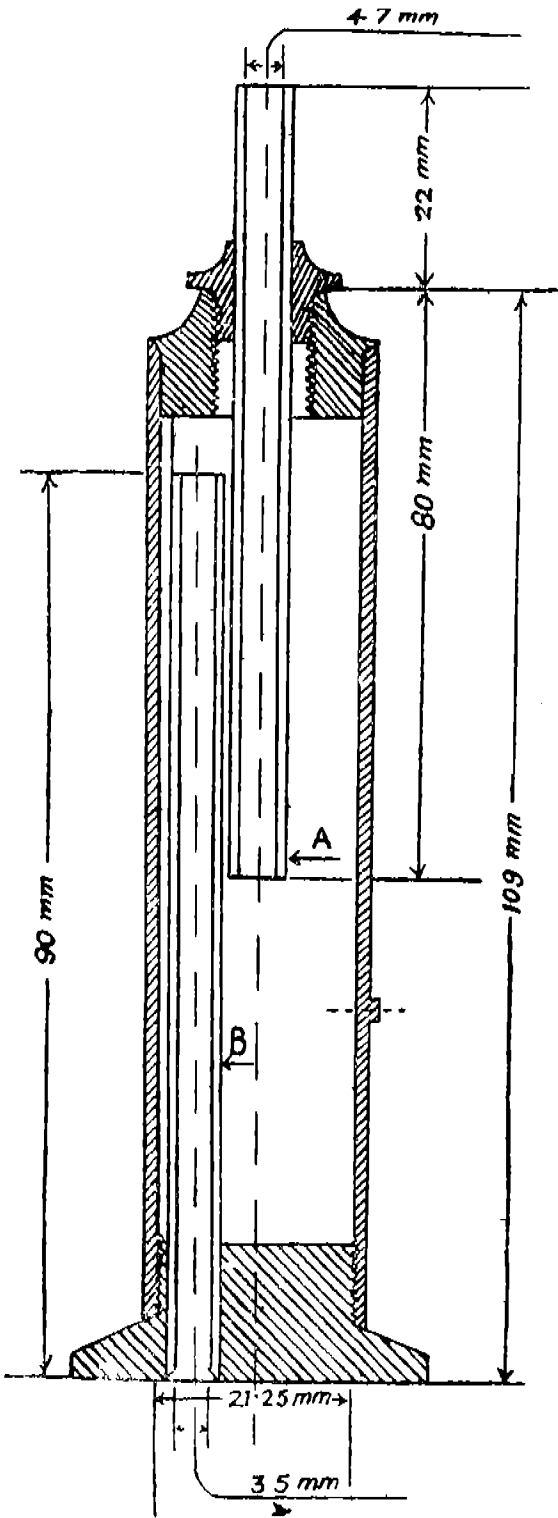
The Smoke Point Lamp to be used shall be constructed in accordance with the specifications contained in Annexure I and the flame height shall be determined in accordance with the method set forth in Annexure II.

ANNEXURE I

Apparatus—

- (a) Lamp.—The lamp shall be the Institute of Petroleum (London) Smoke Point Lamp conforming to the dimensions given below and in Figures 1 and 2.





	Dimension	
	Mm.	Tolerance
Candle :		
Internal diameter	21.25	± 0.25
External diameter	Sliding fit in candle holder	
Length, without cap	1.09	± 0.05
Thread on cap	9.0	mm diam screwed
	1.0	mm pitch
Wick Tube (A) :		
Internal diameter	4.7	± 0.05
External diameter	Close fit in flame guide	
Length	82.0	± 0.05
Air-vent (B) :		
Internal diameter	3.5	± 0.05
Length	90.0	± 0.05
Candle socket (C) :		
Internal diameter	23.8	± 0.05
Wick-Guide (D) :		
Internal diameter	6.0	± 0.02
Air-Inlets (E) :		
(20 in number)		
Diameter	2.9	± 0.05
Gallery (F) :		
External diameter	35.0	± 0.05
Air-inlets (20 in number)		
Diameter	3.5	± 0.05
Lamp body (G) :		
Internal diameter	81.0	± 1.0
Internal depth	81.0	± 1.0
Chimney (H) :		
Internal diameter	40.0	± 1.0
Height, top of chimney to centre of lamp body.	130.0	± 1.0

The lamp shall also conform to the following essential requirements:—

- (i) The top of the wick guide shall be exactly level with the zero mark on the scale;
- (ii) The scale shall be marked in white lines on each side of a white strip, 2 mm. in width on black glass. It shall have a range of 50 mm. graduated in 1 mm. figured at each 10 mm., with longer lines at each 5 mm.
- (iii) An efficient device for raising or lowering the flame shall be provided. The total distance of travel shall be not less than 10 mm. and the movement shall be smooth and regular.
- (iv) The glass window of the door shall be concave to prevent the formation of multiple images.
- (v) The joint between the base of the candle and the candle body shall

(b) *Wick*.—The wick shall be the Institute of Petroleum (London) Smoke point Wick and shall conform to the following specification:—

To be woven solid circular, the cotton to be of American Yarn, ordinary quality.

Casing	..	.	..	..	17 ends, 3ply, nines count.
Filling	..	..	.	.	9 ends, 4ply, sixes count.
Weft	.	..	.	..	2 ply, fifteen count.
Ticks per inch	.	.	.	.	5

Test Room

It is recommended that the room temperature and the barometric pressure be recorded. The lamps shall be placed in a vertical position and completely protected from draughts.

ANNEXURE II

(1) *Apparatus*.—The test shall be carried out in the Institute of Petroleum (London) Smoke Point Lamp as defined in Annexure I, and the wick used shall be wick specified in Annexure I. Only uniform pieces of wick free from all irregularities shall be used for tests.

The test shall be carried out in a room or enclosure kept within the temperature limits of 80° and 85° Fahrenheit.

(2) *Conditioning the wick and application of standard Test*.—Before use in the standard test all new wicks shall be conditioned by means of two cleaning and burning cycles as specified below with a white kerosene, followed by further cleaning and drying. If used otherwise than immediately after conditioning, they shall be redried at 100-105° Centigrade just before use in the standard test.

When used for a standard test they shall be cut to lengths of five and a half inches and no wick in this test shall be less than five inches in length.

DETAILS

(a) *Treatment of the New Wick*.—The new wick, carefully selected, to be free from all visible flaws, shall be cut to a length of six inches and then extracted in a soxhlet apparatus, firstly with petroleum ether (Boiling range 60-80° Centigrade) for at least three siphoning cycles, and then with sulphuric ether for two siphoning cycles.

The wick shall then be dried for thirty minutes at 100-105° Centigrade in an electric oven.

(b) *Preparation of the lamp assembly*.—(Note: The following details including those in the next sub-paragraph regarding burning apply both to wick conditioning and to the standard burning test).

(i) Twenty millilitres of oil (white kerosene in the conditioning operation) previously filtered through filter paper shall be introduced by means of a small funnel (care being taken to avoid fouling the air-inlet tube) into the cleaned and dried oil holder which shall then be placed vertically in a drying oven maintained at 100-105° Fahrenheit, a cylinder containing the oil to a depth of six inches being also placed in the same oven.

(ii) The dried wick shall be immersed in this column of oil for 10 minutes after the oil has attained the oven temperature; it shall then be taken out and fitted into the wick holder.

(iii) This shall be done by inserting the non-burning end of the wick (which must be trimmed free from overlapping or frayed edges in order to prevent jamming caused by compression in the tube) carefully into the burning end of the wick holder, and then pushing with a screw motion until the wick protrudes about a quarter of an inch from the other end.

(iv) All twists arising from this operation shall be cased out by putting slight tension on the wick and pulling it gently to and fro along the tube until no further tendency to

(v) Both ends of the wick shall in turn be made to protrude as far as possible from the tube and soaked separately in the oil, but the short end of the wick shall not be allowed to enter the tube, while this is done.

Somewhat more than one-eighth of an inch of the soaked wick shall be allowed finally to protrude from the burning end of the tube, after which the wick shall be trimmed with a very sharp instrument in such a manner that it is flat and horizontal with a slightly bevelled rim with no frayed ends. The wick shall then be drawn down until exactly one-eighth inch protrudes.

(vi) The wick holder shall then be screwed carefully into the wick holder in such a way that the wick is not caught by the air inlet tube and dragged inwards. If this occurs, the whole operation from insertion onwards shall be repeated.

The oil holder must be held vertically to prevent outflow of oil into the air inlet tube which must remain free from all obstructions.

(vii) The assembled oil holder (and wick holder) shall then be kept in the oven at 100-105° Fahrenheit for twenty minutes, and thereafter inserted into the lamp, which shall be at the room temperature of 80-85° Fahrenheit and not hot from a previous burning test. If any resistance occurs due to the wick catching and bending back at the edges when it reaches the fixed guide of the lamp the wick shall be retrimmed and on no account used in a damaged condition for the standard burning test.

(viii) The lamp shall be placed in a vertical position and completely protected from draughts.

(c) **The Flame Test.**—(i) The wick shall then be turned up by means of the adjusting screw until it can be lit.

(ii) The flame shall be adjusted every minute for the first five minutes at one to two millimetres below its smoke point so that it is kept free from smoking.

(iii) The smoke point shall be obtained by raising the wick until a smoky flame is produced, and then lowering it until the smoky point disappears, just leaving a clear luminous flame.

(iv) At the end of five minutes, adjustment to the exact smoke point shall be made and a stop-watch shall be started at the moment of final adjustment.

(v) The value shall be noted by reading the height of the point of the flame in millimetres, the eye of the observer being about nine inches from the front of the instrument and slightly to one side so that a reflected image of the flame is seen on the scale on one side of the vertical white line, the flame itself being projected against the other side of the scale.

The two readings must be the same to ensure avoidance of vertical parallax.

(vi) Without further adjustment of the flame in any way, its height shall then be read and recorded at intervals of two minutes. After the fifth such interval that is, precisely ten minutes after the moment of final adjustment, the flame height shall be read.

This final measurement in millimetres is the "Flame height" which is referred to in the interpretation of Results, section (5).

(vii) When conditioning a wick with white kerosene, the lamp, shall be allowed each time to burn for twenty minutes, after the five minutes taken for adjustment of the flame as described above [*vide* paragraph (ii) of this section].

(d) **Cleaning of lamp, etc.**—At the end of the test, the oil holder (together with the wick holder) shall be removed from the lamp, drained, cleaned with petroleum ether, dried for 30 minutes at 100-105° Centigrade, and blown out with dry air.

The lamp must be replaced in the oven for not less than five minutes after airblowing to ensure absolute dryness ready for re-use.

(3) **Further details regarding conditioning wick.**—The complete conditioning cycle for a new wick six inches in length shall be as follows:—

(a) Extraction with petroleum ether followed by extraction with sulphuric ether; then drying [*vide* section (3) (a)].

(b) Burning for twenty-five minutes using white kerosene.

- (d) A second burning as before.
- (e) Re-extraction and drying.
- (f) If not used immediately, re-drying for thirty minutes at 100-105° Centigrade immediately before the standard test is carried out.
- (g) Cutting to five and a half inches by trimming both ends.
- (4) **Use of a wick for more than one test.**—A wick which has already been used for a standard test may be re-used subject to the following conditions:—
 - (a) When ready trimmed for re-use, the wick shall not be less than five inches in length.
 - (b) The wick shall have been re-cleaned and dried as follows:—

After withdrawal from the wick holder the wick shall be re-extracted with petroleum ether in a Soxhlet apparatus until the extract is colourless, and then extracted with sulphuric ether until a similar result is obtained. It shall then be dried in an oven at 100-105° Centigrade for at least thirty minutes.
 - (c) On refitting for use, all charred wick from any previous burning test shall be trimmed off.

NOTE.—A wick shall be rejected after use with an oil which has given a value of less than 9 mm. flame height in ten minutes.

(5) **Interpretation of Results.**—(i) At least three determinations shall be made by use of three different pieces of wick to obtain three consecutive readings the extremes of which shall differ from each other by not more than one millimetre.

(ii) The results reported shall be the mean of these three consecutive readings calculated to one-tenth millimetre reporting 0.5 to 0.09 as 0.10.

(iii) When the average value obtained by the prescribed method differs by ± 0.3 millimetre from the limits prescribed in items Nos. 27(4), 27(5) and 27(7) (b) of the First Schedule to the Indian Tariff Act, 1934, a fresh series of determination shall be made and if the average of these is in agreement with the previous series to 0.5 millimetre, the average of the two series shall be taken and reported as the flame height of the oil.

[No. 11.]

E. S. KRISHNAMOORTHY, Jt. Secy.

